

Appl. No. 10/346,077

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REMARKS/ARGUMENTS**Claim Rejections – 35 U.S.C. 103**

The Examiner rejects claims 1, 9, 13, 14, 16, 24, 27 and 28 under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 5,550,809 ("Bottomley") in view of United States Patent No. 5,204,874 ("Falconer"). In response, Applicant respectfully traverses the Examiner's rejection for reasons detailed below.

The law on obviousness under 35 U.S.C. 103 was recently addressed in *KSR Int'l v. Teleflex, Inc.*, No. 04-1350, slip op. at 14 (U.S., Apr. 30, 2007). Following this, examination guidelines were released on October 10, 2007 in regards to determining obviousness under 35 U.S.C. 103. According to these guidelines, the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.* 383 U.S. 1, 148 USPQ 459 (1966). Obviousness is a question of law based on underlying factual inquiries. The factual inquiries enunciated by the Court are as follows:

- (1) Determining the scope and content of the prior art;
- (2) Ascertaining the differences between the claimed invention and the prior art; and
- (3) Resolving the level of ordinary skill in the pertinent art.

The Graham factors, including secondary considerations when present, are the controlling inquiries in any obviousness analysis. Once the findings of fact are articulated, Office personnel must provide an explanation to support an obviousness rejection under 35 U.S.C. 103. According to KSR, for the Patent Office to properly combine references in support of an obviousness rejection, the Patent Office must identify a reason why a person of ordinary skill in the art would have sought to combine the respective teachings of the applied references.

Applicant's analysis below demonstrates that the Examiner has failed to properly conform to the aforementioned guidelines for a finding of obviousness under 35 U.S.C. 103.

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Claim 1

Applicant submits that claim 1 of the present application is patentable over Bottomley and Falconer, as the findings of fact as articulated by the Examiner are inaccurate. In particular, the Examiner has not properly determined the differences between the claimed invention and the prior art. Furthermore, the Examiner has not provided a valid explanation to support an obviousness rejection under 35 U.S.C. 103. Applicant's reasoning is detailed below.

Differences between the claimed invention and the prior art

Claim 1 recites "for each set of M consecutive symbols, performing a first parallel code multiplying operation by multiplying the M symbols by each of the L codewords of the second code, thereby producing L first output symbols, each of the L output first output symbols being associated with one of the L codewords" (emphasis added). Therefore, claim 1 defines a first parallel code multiplying operation for each set of M consecutive symbols. The Examiner contends that Bottomley teaches this subject matter in column 1, lines 25-34. However, this portion of Bottomley teaches "at a transmitter, a binary information symbol $b (\neq 1)$ can be spread by multiplying b with a spreading sequence x ; for example, the spreading sequence x might be $+1, -1, +1, -1$, consisting of four binary chips". By describing the spreading of only one binary information symbol, Bottomley is completely silent to a first parallel code multiplying operation as claimed by the Applicant. In particular, there is no hint or suggestion of any parallelism in the spreading of the binary information symbol.

Claim 1 also recites "for a set of N consecutive first output symbols associated with the codeword, performing a respective second parallel code multiplying operation by multiplying the set of N consecutive first output symbols by each of the K codewords of the second code to produce a set of K second output symbols, each second output symbol being associated with one of the K codewords and with said codeword of the set of said L codewords" (emphasis added). Therefore, claim 1 defines a second parallel code multiplying operation. The Examiner contends that Bottomley teaches this subject matter in column 1, lines 25-34. However, as noted above, this portion of Bottomley does not teach or suggest a parallel code multiplying operation

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whatsoever, nor does it teach a "first parallel code multiplying operation" in combination with a "second parallel code multiplying operation" as claimed by the Applicant.

The Examiner concedes that Bottomley does not teach "determining an overall maximum of the second output symbols output of said second parallel code multiplying operations". Applicant agrees with the Examiner. Moreover, Applicant submits that Bottomley has little or nothing to do with the present Application.

In view of the Examiner's admitted difference between claim 1 of the present application and Bottomley, the Examiner looks to Falconer at column 6, lines 10-14 to contend that claim 1 of the present application is obvious. Applicant appreciates that this portion of Falconer teaches that "The predetermined size of the block of data symbols defined by the matrix is derived from the maximum number of data symbols which can be transmitted at a predetermined chip rate within a predetermined length transmission block" (emphasis added). However, the "size of the block of data symbols" represents the number of data symbols, which has nothing to do with determining an overall maximum of the second output symbols output of said second parallel code multiplying operations as claimed by the Applicant.

In view of the foregoing, Applicant submits that the Examiner has not properly determined the differences between the claimed invention and the prior art. Therefore, the findings of fact as articulated by the Examiner are improper.

Explanation to support an obviousness rejection

As noted above, for the Patent Office to properly combine references in support of an obviousness rejection, the Patent Office must identify a reason why a person of ordinary skill in the art would have sought to combine the respective teachings of the applied references. The examination guidelines indicate that "The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious." The Court quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), stated that "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." Applicant appreciates that the Examiner has articulated a reason

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why the claimed invention would have been obvious. However, for reasons detailed below, the Examiner's articulated reason can not be regarded as being valid.

The Examiner states that 'it would have been obvious for one of ordinary skill in the art at the time of the Applicant's invention to include, "determining an overall maximum of the second output symbols output of said second parallel code multiplying operations," in the invention as disclosed by Bottomley et al. for the purposes of data rate control.' First of all, as noted above, Bottomley does not teach "determining an overall maximum of the second output symbols output of said second parallel code multiplying operations". Furthermore, even if Bottomley were to teach this feature, which Applicant does not concede, there is no apparent reason as to why the person skilled in the art would understand that combining this feature with Bottomley would facilitate data rate control. The Examiner has not provided any such rational.

Furthermore, Applicant notes that even if the Patent Office is able to articulate and support a suggestion to combine the references, it is impermissible to pick and choose elements from the prior art while using the application as a template—see *In re Fine*, 837 F.3d 1071 (Fed. Cir. 1988). It is respectfully submitted that incorporating the teachings of Falconer in relating to the size of the block of data symbols with the teachings of Bottomley is an attempt to arrive at claim 1 while using the present application as a template. This attempt is flawed because the Examiner's proposed modification does not account for the fact that neither Falconer nor Bottomley teach Applicant's claimed "first parallel code multiplying operation" and "second parallel code multiplying operation". Bottomley and Falconer simply have little or nothing to do with Applicant's claimed method of decoding M x N symbols.

If one were to use the present application as a template, which is nonetheless improper according to *In re Fine*, one would have to first modify Bottomley so that it teaches Applicant's claimed "first parallel code multiplying operation" together with Applicant's claimed "second parallel code multiplying operation". Also, one would have to modifying Falconer so that it teaches "determining an overall maximum of the second output symbols output of said second parallel code multiplying operation" as claimed by the Applicant. These numerous modifications cannot be regarded as obvious because the gap between the prior art and the claimed invention is too great. Applicant notes that the aforementioned examination guideline

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that issued on October 10, 2007 indicates that "the gap between the prior art and the claimed invention may not be 'so great' as to render the [claim] non-obvious to one reasonably skilled in the art." Therefore, the proposed combination of Calhoun and Perkins cannot render the present application obvious.

In view of the foregoing, Applicant submits that claim 1 of the present application is patentable over Bottomley and Falconer.

Applicant submits that claims 9, 13, 14, 16, 24, 27 and 28 are patentable over Bottomley and Falconer for similar reasons provided above in respect of claim 1.

The Examiner is respectfully requested to reconsider and withdrawn the rejections of claims 1, 9, 13, 14, 16, 24, 27 and 28 under 35 U.S.C. 103(a).

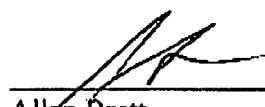
Other Claim Rejections – 35 U.S.C. 103(a)

The Examiner rejects claims 2, 4, 5, 8, 17, 19, 20, 23, 25 and 26 under 35 U.S.C. 103(a) as being unpatentable over Bottomley in view of Falconer and further in view of United States Patent No. 5,103,459 ("Gilhousen"). Applicant notes that the aforementioned claims depend on one or more claims for which their rejections should be withdrawn. Therefore, Applicant submits that the rejection of claims 2, 4, 5, 8, 17, 19, 20, 23, 25 and 26 should similarly be withdrawn. The Examiner is respectfully requested to reconsider and withdraw the rejection of claims 2, 4, 5, 8, 17, 19, 20, 23, 25 and 26 under 35 U.S.C. 103(a).

Favorable consideration is requested.

Respectfully submitted,

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